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Indian Standard

अधुनगुँहर

0555,

192"

SPECIFICATION FOR "RE-AFFIRMED" PLIERS, TIE BACK, NANCE TYPE, DENTAL

- 1. Scope Dimensions and other requirements for Nance type tie back pliers used in dentistry.
- 2. **Material** Stainless steel'conforming to Designation **20Cr13** of IS: 6603-I 972 ' Specification for stainless steel bars and flats'.
- 3. Shape and Dimensions-As shown in Fig. 1.
- 4. Workmanship and Finish
- **4.1** The two halves of the pliers shall move freely about the joint without any play and shall open fully. The movement of the instrument shall be even and the jaws shall register accurately.
- 4.2 The surfaces of the pliers shall be finished smooth except the outside surface of handles which shall have matt finish. The edges shall be even, rounded and free from pits.
- 4.3 Joint Screw joint conforming to 6 of IS: 3642-I 966. General requirements for surgical instruments. The screw used shall be of slotted cheese head pattern as shown in Fig. 1. The profile of the screw thread shall conform to IS: 4218(PartI)-1967. SO Metric screw threads: Part I Basic and design profiles. It shall be rendered immovable in use but shall be capable of being unscrewed for repairs.
- 4.4 The pliers shall be passivated and polished bright.
- 5. Heat Treatment-The pliers shall be uniformly hardened and tempered to 370 to 410 HV.
- 6. Tests
- **6.1** Corrosion Resistance Test -Scrub the sample with soap and warm water, rinse in hot water and then dip in 95 percent ethyl alcohol. Dry the sample. Immerse in copper sulphate solution at room temperature for 6 minutes and wash off with fresh water or wipe with wet cotton wool.

Make up the solution as follows:

Copper sulphate (CuSO₄·5H₂O)

4.0 g

Sulphuric acid (H₂SO₄) (sp gr 1.84)

10.0 g

Distilled water [see IS: 1070-I 960 Specification for water, distilled

90·0 ml

quality (revised)]

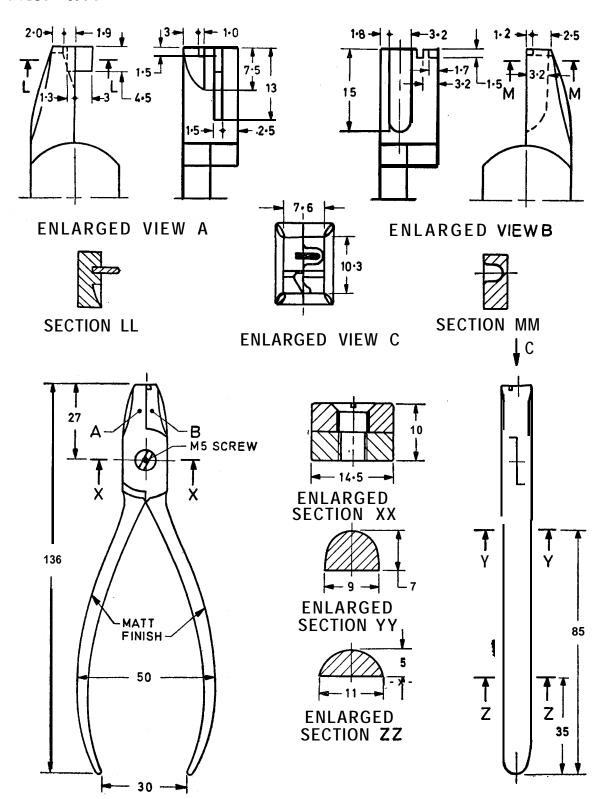
 N_0 red stains or spots on the sample shall be allowed but dulling of the polished surface may be permitted.

- 6.2~Practical Test-The pliers shall be tested by primary smaller loops and tie-back spurs from the orthodontic hard drawn stainless sreel wire of size 0.70×0.98 to 0.87×1.10 and round hard drawn stainless steel wire of size 0.4 to 0.7 mm. The testing wire shall be placed on the slot for bending the loop. The plier shall do this easily and cleanly. The test shall be carried out six times. On the completion of the test, the pliers shall show no sign of damage when examined under a microscope at a magnification of 20×10^{-10} km.
- 7. Marking Each pliers shall be legibly and indelibly marked with the manufacturer's name, initials or trade-mark; the letters 'SS'; and the country of manufacture.
- 7.1 ISI Certification Marking Details available with the Indian Standards Institution.
- 8. Packing -As given in 6 of IS: 4314-I 987 'Specification for pliers, cone socket, dental'.

Adopted 29 April 1974

@ July 1974, ISI





All dimensions in millimetres. FIG. 1 PLIERS, TIE BACK, NANCE TYPE, DENTAL